Welcome to the Biweekly Restoration Information Update Page. This web site

- Provides current information on wetland and river corridor restoration projects
- Recognizes outstanding restoration projects
- Provides a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project. Just send your write-up to EPA's contractor at restorationupdate@tetratech-ffx.com or mail it to Kathryn Phillips, Biweekly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that serves or has the appearance to serve as advocating or lobbying for any political, business, or commercial purposes.

Contents

- **Feature Article** - Our feature article recognizes outstanding restoration projects or programs.
- **Community-Based Restoration Partnerships** - This section highlights innovative community-based partnerships working to restore wetlands and river corridors.
- **Funding for Restoration Projects** - Here you'll find information pertaining to grants and other funding sources available to local watershed groups and other grassroots community organizations to implement restoration projects.
- **News and Announcements** - This section includes up-to-date information on regulatory issues affecting restoration, conference and workshop announcements, and other newsworthy tidbits.
- **Restoration-Related Web Sites** - Check out other groups on the Web that are helping in the effort to restore wetlands and river corridors.
- **Information Resources** - Books, journals, fact sheets, videos, and other information resources to aid you in your restoration project are provided here.
- **Ask a Restoration Question** - Post your restoration related question. Answers will be provided by the EPA and Bi-Weekly readers.

Feature Article

King County Brings Wetland 79 Back to Life

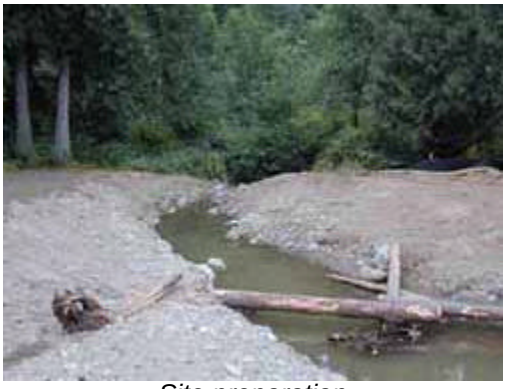
An oxbow wetland is getting a new lease on life, thanks to the restoration efforts of King County, Washington. In 1999 King County began an enhancement and restoration project on Wetland 79, a 2-acre, high-quality pond and wetland complex along the Cedar River, in King County. Wetland 79 was formed in the 1930s when the Burlington Northern Railroad constructed a raised railroad bed and shifted the alignment of the Cedar River to the north. A culvert under the railroad bed was the only remaining connection between the wetland and the river.

Although the oxbow had been naturally silting in since it was formed, siltation began to rapidly accelerate in the past few decades because of human activities. Livestock had access to the wetland, eroding the wetland banks. In the early 1990s, the landowner filled in portions of the wetland and built a home adjacent to the site. To compound the problems, beavers built dams near the outlet culvert, restricting fish passage in and out of the wetland. The wetland's health and productivity rapidly dwindled.

A flood in the winter of 1995-1996 changed everything. The flood damaged the new house beyond repair, leading the landowner to sell the property to King County in 1998. The County removed the house in 1999. In 2000 the County initiated several restoration activities in and around the wetland, including removing the fill placed in the wetland, removing silt from a portion of the oxbow channel, enlarging the fish spawning area of the wetland by connecting a finger of the open water wetland to a spring-fed pond located on an adjacent piece of property, and adding large woody debris to the newly constructed channel to increase habitat complexity. Future plans have been made to remove invasive species from the wetland. Work will begin on this project later this year.

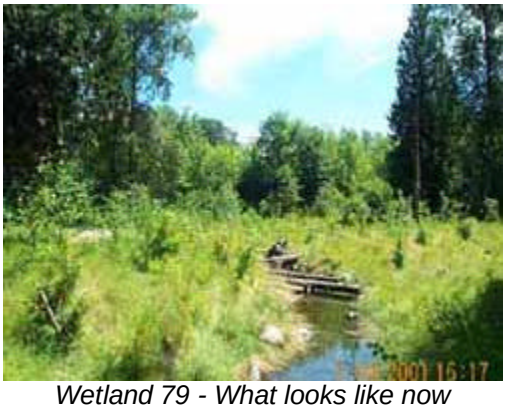
The goal of the project was to "protect the wetland while also creating new areas for fish habitat," explains Jon Hansen of the King County Department of Natural Resources. "In our region, salmon populations are on the decline and most jurisdictions are promoting fish enhancement projects, sometimes at the expense of other resources such as wetlands. To be successful, however, such projects must be mindful of the larger ecosystem and not lose valuable habitat and species while trying to recover others. In this project, we were able to integrate both wetland and fish enhancement." The restored area will provide high-value aquatic habitat for wildlife, particularly for salmon spawning, rearing, overwintering, and flood refuge. The County plans to conduct guided tours of the site to educate the public about wetlands and wildlife. For more information contact Jon Hansen, Senior Ecologist, King County Department of Natural

Wetland 79 - What looked like before



Site preparation

Trees and vegetation planted



Wetland 79 - What looks like now

Resources, Wastewater Treatment Division, 201 South Jackson Street, Suite 510, Seattle, WA 98104. Phone: (206) 296-1966; e-mail: jon.hansen@metrokc.gov; Internet: http://dnr.metrokc.gov/wtd/wetland79/.

If you'd like your project to appear as our next Featured Article, e-mail a short description to restorationupdate@tetratech-ffx.com.

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Community-Based Restoration Partnerships

Youth Restore Habitat Along Little Susitna River Bank, Alaska

Since 1997 the Youth Restoration Corps (YRC) has been working on restoration projects along the Little Susitna River in southern Alaska. The program, which involves more than 70 local youth, consists of about 60 percent projects restoring stream habitat and 40 percent hands-on educational programs covering climate, terrestrial landforms, and soil erosion processes. In 2000 YRC restored riparian habitat in seven project sites spread out over 1.5 miles of streambank. This year, YRC plans to build on this success with the restoration of an additional 1,810 feet of riparian habitat along the river. This year's activities will include a number of bioengineering techniques such as sod layering to promote new vegetation growth, hand-placement of root-wad structures to deflect hydraulic energy and provide habitat, and use of erosion mats to cover exposed soils. YRC will also establish a monitoring program to record changes in plant community composition and fish habitat. Partners working together to make this program a success include the FishAmerica Foundation and the NOAA Restoration Center, along with other corporate and foundation sponsors like the University of Alaska and Alaska Recreational Management, who seek to restore habitat and promote environmental stewardship in south-central Alaska.

For more information, visit the NOAA Community Restoration web site featuring this project http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/index.html or contact the Youth Restoration Corps Director, Kelly Wolfe, at P.O. Box 2416, Kenai, Alaska 99611. Phone: (907) 262-1032 or e-mail: yrc@gci.net.

Wetlands Restored to Ease Burden of Flooding

Jerry Gragnani, manager of a 16,000-acre farm near Tranquility, California, often found a section of his farmland flooded after as little as 1 inch of rainfall. Floods frequently destroyed crops on the lower parts of his land. Instead of continuing to farm in this risky, flood-prone area, Gragnani looked for other options. He learned of the Wetlands Reserve Program administered by the USDA Natural Resources Conservation Service (NRCS). Under one program option in the Wetlands Reserve Program, the NRCS purchases perpetual conservation easements on the land while the landowner retains ownership of the property. To qualify for the program, Gragnani needed to verify the land was a former native wetland that had been drained for agricultural purposes. After verifying his land met this requirement, the NRCS developed a plan to restore the wetlands on the flood-prone portion of the property. As of April 2000, nearly 4,000 acres of wetland have been restored, and plans are being made to convert an additional 2,000 acres back to native wetland. Grangnani is pleasantly surprised by the wealth of wildlife that have moved into the area and appreciates the ability of the wetland to trap floodwaters, preventing the once common destruction of his crops.

For more information on the NRCS Wetlands Reserve Program, visit the web site http://www.wl.fb-net.org/ or contact Larry Norris, Area Biologist, NRCS, 3530 West Orchard Court, Visalia, CA 93277. Phone: (599) 732-9163.

Student Initiates Wetland Restoration Effort at Middlebury College

Over the course of the 1999-2000 school year, senior Lara Anne DuMond took on the challenge to draft a restoration plan for a 12-acre wetland located on the Middlebury College campus in Middlebury, Vermont. The restoration project began with the delineation of the wetland's boundaries and an assessment of the current vegetation, hydrological regime, and soil types. DuMond then developed a restoration plan for the wetland to be submitted to the college planning offices and interested faculty. It contained information on past restoration efforts gathered through contacts with the Vermont Department of Environmental Conservation, USDA Natural Resources Conservation Service, and U.S. Fish and Wildlife Service; land-use history of the site obtained from historic photos from the Natural Resources Conservation Service and the Middlebury town land records; and native plants provided by the Vermont Natural Heritage Program. Funding for the project was received through grants from NWF's Campus Ecology Program and the

Middlebury Environmental Council. In 2001 the college hopes to implement some of the restoration recommendations made in the report, including planting of native wetland shrubs to shade out invasive reed species and diversion of water from a man-made ditch in order to restore the wetland's natural water regime. More information about this project can be obtained by visiting the National Wildlife Federation's Campus Ecology Yearbook http://www.nwf.org/campusecology/ or by sending an e-mail to Lara Anne DuMond ldumond78@hotmail.com.

If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetratech-ffx.com.

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Funding for Restoration Projects

National and Regional Habitat Restoration Partners

The National Oceanic and Atmospheric Administration Community-Based Restoration Program is a federal financial and technical assistance program. It promotes strong partnerships at the national, regional, and local levels through the funding of grass-roots, community-based activities that restore living marine resources and their habitats and promote conservation. This program is interested in developing national and regional partnerships that will lead to the accomplishment of on-the-ground, community-based restoration of marine, coastal, and freshwater habitats. Additional details and a grant application form are available at the web site, http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/index.html.

California State Parks Habitat Conservation Fund

The California State Parks Habitat Conservation Fund has grants available to cities, counties, and districts for habitat conservation projects including

- Habitat for rare and endangered, threatened, or fully protected species
- Wetlands
- Aquatic habitat for spawning and rearing of anadromous salmonids and trout resources
- Riparian habitat

Funding for this program is approximately $2 million, with most grants consisting of about $100,000. Each program requires a dollar-for-dollar match. Applications are due October 1. For more information visit http://www.parks.ca.gov/default.asp?page_id=21361 or e-mail: localservices@parks.ca.gov or call: (916) 653-7423.

Chesapeake Bay Trust Pioneer Proposal Program

The Chesapeake Bay Trust (CBT) is accepting grant proposals to fund techniques and programs that develop innovative approaches to Chesapeake Bay protection and restoration. CBT may fund up to $10,000 for each successful pioneer proposal. Concept letters are due September 21, 2001. Eligible programs include those involving the Chesapeake Bay and its tributaries.

For more details, visit the web site http://www.chesapeakebaytrust.org/grantprograms.html.

Multiple Grants Available from U.S. Fish and Wildlife Service, Western Washington Office

The U.S. Fish and Wildlife Service, Western Washington Office, Division of Watershed Protection and Restoration, is soliciting for project proposals for funding in fiscal year 2002. Programs now accepting proposals include Washington State Ecosystems Conservation, Partners for Fish and Wildlife, Puget Sound Program, and Chehalis Fisheries Restoration Program. Total funding for these projects is approximately $500,000. A letter of intent to apply is due to the Western Washington Office by September 14, 2001.

For more information and an application contact the Western Washington Office, 510 Desmond Drive, Suite 102, Lacey, WA 98503, Attention Pam Kosonen.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetratech-ffx.com.

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News and Announcements

Salt Marsh Restoration and Monitoring Guidelines from New York

The New York State Salt Marsh Restoration and Monitoring Guidelines, released in December 2000, were developed jointly by the New York Department of State and the Department of Environmental Conservation to assist local governments, environmental organizations, and others in developing and monitoring salt marsh restoration projects. The guide addresses several causes of marsh degradation, including ditching, diking, pollution, and sea level rise, and provides information on a number of categories of remediation methods, including the manipulation of elevation and vegetation and the control of invasive species. The document also provides a standard monitoring protocol to increase data collection and improve project evaluation.
The document is available from the New York Department of State and can be downloaded from http://www.dos.state.ny.us/pdfs/saltmarsh.pdf (PDF) or from the Department of Environmental Conservation web site http://www.dec.state.ny.us/website/dfwmr/marine/smguide.html. To request a hard copy or for additional information, contact Nancy Niedowski, NYS Department of State, 41 State Street, Albany, NY 12231; e-mail: nniedows@dos.state.ny.us; phone: (518) 473-8359.

National Invasive Species Management Plan

The National Invasive Species Council is an interagency workgroup consisting of federal and state government agencies, nonprofit groups, private industry, and academic partners designed to provide oversight on the control of invasive species. The group works to improve the coordination of invasive species control activities. It has issued a final plan that provides guidance on the control of invasive species, including a list of 57 action items to be implemented over the next 4 years. The action items are intended to guide federal agencies' actions to prevent and control invasive species as well as minimize their economic, ecological and human health impacts. The plan, released in January 2001, encourages prevention, early detection, and control of invasive species but also provides recommendations, procedures, and monitoring efforts for restoration of native species. The plan is available at http://www.invasivespecies.gov/council/nmp.shtml.

Inventory of Ecosystem Restoration Projects

The U.S. EPA's Office of Research and Development (ORD) National Risk Management Research Laboratory and U.S. EPA's Office of Water have developed an Internet-accessible database of ecosystem restoration projects in aquatic and terrestrial environments conducted by government (federal, state, local) and nongovernment organizations in the Mid-Atlantic Integrated Assessment (MAIA) region, which includes Pennsylvania, Delaware, Maryland, the District of Columbia, Virginia, and West Virginia, as well as portions of New York, New Jersey, and North Carolina. This inventory allows practitioners to showcase their ecosystem restoration efforts and share lessons learned with others in the MAIA region.
The MAIA inventory has been integrated with the existing U.S. EPA Office of Water's River Corridor and Wetland Restoration site (http://www.epa.gov/owow/wetlands/restore/). The combined inventory enables practitioners, restoration planners, researchers, and other stakeholders to access a searchable, central repository of restoration project information including descriptions of the restoration sites, problems being addressed, goals of the projects, critical ecosystem/environmental factors, technical approaches, costs, monitoring activities, and contact people for more detailed information.
From June to September 2001, members of ORD are launching an effort to contact organizations and programs conducting and sponsoring restoration projects within the MAIA region and inform project owners of the inventory while encouraging them to add their projects. Information contained in this inventory supports research efforts in the National Risk Management Research Laboratory's Ecosystem Restoration and Risk Management Research Programs.
Ecosystem restoration project information may be submitted on-line by accessing the Put Your Project on the Map site (http://yosemite1.epa.gov/water/restorat.nsf/pypmappg2/). This site provides an interactive response template that can be used to enter restoration project information. For multiple restoration projects, a template can be created from an initial entry order to facilitate additional entries, and original entries can be edited and updated as additional project information is obtained. Electronic or hard copy response templates are also available.
For more information contact the Restoration Project Voice Mail: (513) 487-2340 or e-mail: ORD_MAIA_Restoration_Inventory@epamai.epa.gov.

Shoreland and Lake Management Information Combined for Easier Access

A new web site that provides a wealth of shoreland and lake management information in one place is now on-line. The Minnesota Shoreland Management Resource Guide is designed for people who make the everyday decisions that affect lakes and rivers. The site, collaboratively developed by the University of Minnesota Sea Grant Program and a multidisciplinary steering committee, made its debut this month but has already won a national competition, earning a gold award from the Association of Natural Resources Extension Professionals.
The Shoreland Guide site provides access to documents recognized as important for shoreland management and includes printer-ready fact sheets, scientific and technical literature, and publications that are out of print, as well as new materials. It also profiles citizen lake restoration projects and supports an interactive state map that helps users identify people to contact with shoreland questions. The site includes a glossary defining technical terms, agencies, and acronyms often found in shoreland publications.
The project was made possible by a grant to the University of Minnesota Sea Grant Program from the Minnesota State Legislature through the Board of Water and Soil Resources. The shoreline guide can be accessed through the web site www.shorelandmanagement.org, or if you prefer, a compact disk of the shoreland site is available for $4 by contacting the Minnesota Sea Grant by phone at (218) 726-8106; e-mail: seagr@d.unm.edu; web site: http://www.seagrant.umn.edu/.

Restoration-Related Web Sites

http://www.sfei.org/

The San Francisco Estuary Institute (SFEI) encourages research, monitoring and communication efforts that support the protection and enhancement of the San Francisco estuary. Information on several projects is available through this web site, including descriptions of the contaminant monitoring and research program (http://www.sfei.org/cmr/Projects.html), biological invasion program (http://www.sfei.org/invasions.html), and regional monitoring program (http://www.sfei.org/rmp/index.html). The Bay Area EcoAtlas (http://www.sfei.org/ecoatlas/index.html) is also accessible through this site. The EcoAtlas is a database of past and present ecology data on the bays, baylands, and adjacent habitats of the San Francisco Bay area. EcoAtlas is designed to support regional environmental planning and management efforts. This site provides a wealth of technical information on monitoring programs and controlling invasive species in the San Francisco Bay.

http://www.larch.psu.edu/Students/Research/springcreekrestore/title.html [Link no longer available, October 2003]

Clear Water Conservancy Stream Restoration Demonstration Project. The riparian restoration project is a partnership between the Clear Water Conservancy and the Pennsylvania Military Museum to restore portions of the streambank of Spring Creek, a formerly degraded stream that runs through museum grounds. The web site includes a progress report on the Spring Creek project as well as a brief description of stream restoration. This site is easy to navigate and provides both general stream restoration information and information specific to the Spring Creek project.

http://dogwood.botany.uga.edu/~lkruse/projects.html

Stream Restoration Scrapbook. Developed by a summer intern with Georgia's Conasauga River Alliance, this web site offers a detailed pictorial tour of a streambank restoration project along Sumac Creek, a tributary of the Conasauga River. Numerous clear pictures show the step-by-step process of streambank restoration, including the laying of geo-tile and planting of grass and trees. This is a good site showing a pictorial overview of the restoration process from start to finish, including causes of streambank erosion.

http://www.coastalamerica.gov/

Coastal America is a nonprofit partnership dedicated to protecting, preserving, and restoring America's coastal heritage. It works with public, private, and government agencies to perform coastal and wetland restoration efforts throughout the United States. Information is available on community-based, corporate, and military conservation partnerships, including project descriptions, funding sources, and contact information. This site provides specific information on projects funded by Coastal America grant programs.

http://www.npwrc.usgs.gov/resource/literatr/wetresto/wetresto.htm

Wetland Restoration Bibliography is a cooperative project between the Northern Prairie Science Center and the Midcontinent Ecological Science Center. The bibliography provides a searchable, comprehensive listing of literature on wetland restoration. New entries to the bibliography can be added through this site. This site provides a listing of books and articles on topics such as monitoring procedures, riparian restoration and invasive species.

http://www.dep.state.pa.us/dep/deputate/watermgt/WC/Subjects/WWEC/GENERAL/WETLANDS/wetlands.htm

Pennsylvania Department of Environmental Protection This site provides a listing of Pennsylvania's waterways, wetlands, and erosion control initiatives. Information is available on Pennsylvania's Wetland Net Gains Strategy and initiatives to facilitate wetlands restoration. This site is most useful for Pennsylvania residents interested in organizing a wetland restoration project.

http://www.rivernetwork.org/

The River Network helps people monitor, protect, and restore rivers and watersheds. The River Network supports grassroots river and watershed conservation groups by providing directories of river groups and funding sources, a resource library, and a calendar of events. This site is useful for people seeking to get involved in restoration projects.

http://www.dcr.state.va.us/dnh/native.htm

Native Plants for Conservation, Restoration, and Landscaping. Part of a project under the Virginia Department of Conservation and Recreation, this web site describes the differences between native and alien species, lists the benefits of native plants, and provides information on how to buy and grow native plants in Virginia. The site provides tables that are thorough and useful for people looking for plants that will grow under specific wetland conditions.

http://www.cce.cornell.edu/onondaga/fingerlakeslan/

Finger Lakes Landscapes. The Cornell Cooperative Extension of Onondaga County developed this site to educate landowners about landscaping methods that help to protect water quality. The site provides easy-to-understand, practical efforts for private landowners.

http://www.cfda.gov/federalcommons/

"One-Stop Shop" Web Site for Federal Grants. The Federal Commons web site allows users to browse the General Services Administration catalog of federal grant programs. Through the grant transactions link, users can securely conduct grant transactions with federal granting agencies. Eventually, the site will allow applicants to submit and track their grant applications on-line and provide a searchable database of new grant announcements. The site provides a comprehensive

listing of possible federal funding sources, but it is difficult to navigate without a searchable database.
Let us know about your restoration-related web site. Please send relevant URLs to restorationupdate@tetratech-ffx.com.

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Upcoming Conferences and Events:
NEW LISTINGS:
Wetlands and Remediation: The Second International Conference
September 5-6, 2001
Burlington, Vermont
Batelle Memorial Institute is sponsoring the Second International Conference on Wetlands and Remediation. The focus will be on topics of common concern related to the cleanup of contaminated wetlands and the treatment of contaminated groundwater, surface waters, and wastewater using natural and constructed wetlands. For more information, visit the web site http://www.battelle.org/environment/er/conferences/wetlandscon/default.htm, or contact the conference office by e-mail: wetlandsconf@battelle.org or by phone: (614) 424-7604.
Oregon Watershed Weeks
September 15-October 21, 2001
Communities throughout Oregon
To promote watershed awareness and volunteer cleanup efforts, the state of Oregon encourages local communities to sponsor Watershed Weeks activities. Common activities include stream walks, tree plantings, canoe trips, aquatic art festivals, and habitat restoration efforts. Activities are commonly sponsored by area watershed groups. For more information, visit the web site http://www.seagrant.orst.edu/wweek/index.html, or contact Paul Heimowitz at the OSU Extension Sea Grant by phone: (503) 722-6718 or by e-mail: Paul.Heimowitz@orst.edu.
PREVIOUS LISTINGS:
Managing River Flows for Biodiversity: A Conference on Science, Policy and Conservation Action
July 30-August 2, 2001
Fort Collins, Colorado
Sponsored by American Rivers, The Nature Conservancy, and other nonprofit organizations and federal resource agencies, this conference will address the challenges of protecting natural river flows as competing demands for water increase. Participants will benefit from new information, tools, and networking opportunities to advance flow restoration and protection goals. For more information, visit www.freshwaters.org/conference or contact Jamie Mierau, American Rivers, at e-mail jmierau@american.rivers.org.
The Society for Conservation Biology: Ecological Lessons from Islands
July 29-August 1, 2001
Hilo, Hawaii
The Society for Conservation Biology will host its annual conference, focused on the theme Ecological Lessons from Islands. The conference will include discussions on figurative islands of isolated fragments of habitat within altered landscapes. A variety of field trips are planned to give participants an opportunity to gain familiarity with the highly endemic Hawaiian biota, the agents acting to diminish it, and the efforts of local conservation biologists and managers to develop strategies for providing long-term protection for what remains. For more information on the conference, visit the web site http://www.uhh.hawaii.edu/~scb/.
To post your restoration news and announcements, please send information to restorationupdate@tetratech-ffx.com.

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Information Resources
Self-Guided Tours of the Barataria-Terrebonne Estuary Published by the Barataria-Terrebonne National Estuary Program
The Barataria-Terrebonne National Estuary Program developed a guidebook for school and civic groups and individuals interested in learning about wildlife habitats in the estuary. This book provides tour information for several trips that demonstrate the effects of coastal land loss on the estuary ecosystem. To order the guidebook on-line, visit www.btnep.org. Guidebooks can also be

ordered by contacting Deborah Schultz, Education Coordinator; Barataria-Terrebonne National Estuary Program, Program Office, Nicholls State University Campus, P.O. Box 2663, Thibodaux, LA 70310; phone: (504) 477-0868; e-mail: deborah_s@deq.state.la.us.

Oregon Wetlands Newsletter of the Oregon Wetlands Joint Venture

This newsletter highlights partnerships working on wetland-related projects in Oregon, including habitat restoration and enhancement, land acquisition, and development of educational materials. The newsletter is available in pdf format from the web site http://wetlands.dfw.state.or.us/pdfs/Wet032002.pdf or by calling (503) 697-3889.

Balancing Water: Restoring the Klamath Basin Published by the University of California Press

Photographers Tupper Ansel Blake and Madeleine Graham Blake worked with writer William Kittredge to produce this book about the Klamath Basin's water and wetlands, the natural and human communities they sustain, and the difficult reconciliation of the conflicting values they evoke. The book can be ordered on-line at http://www.ucpress.edu/books/pages/8878.html.

Guidelines for the Conservation and Restoration of Seagrasses in the United States and Adjacent Waters Published by the National Oceanic and Atmospheric Administration's Coastal Ocean Program

Seagrass ecosystems are protected under the no-net-loss policy for wetlands and are critical to the health of coastal waters; however, development has caused tremendous losses in seagrass beds along many coasts. These guidelines, released by NOAA in 1998, provide practical and technical information to make seagrass plantings a success. The guidelines are available for download in pdf form from the web site http://shrimp.bea.nmfs.gov/library/digital.html.

If you'd like to publicize the availability of relevant information resources, please send information to restorationupdate@tetratech-ffx.com.